

**Ordinance No. \_\_\_\_\_ - 2012**

**AN ORDINANCE REGARDING CRITICAL AREA REGULATIONS FOR  
GEOLOGICALLY HAZARDOUS AREAS AND FREQUENTLY FLOODED AREAS;  
AMENDING SAN JUAN COUNTY CODE SECTIONS 18.10.040, 18.30.120 AND  
18.30.130**

**BACKGROUND**

- A.** The County was scheduled to review, and where necessary, update its development regulations regarding critical areas by December 1, 2006, to ensure consistency with RCW 36.70A (the Growth Management Act, or GMA). A review of the County's critical areas regulations, including regulations regarding Geologically Hazardous Areas and Frequently Flooded Areas, was adopted in Resolution 98-2005. Although some updates to critical areas regulations were adopted in Ordinance 15-2005, further action was reserved for a later time.
- B.** Geologically Hazardous Areas are defined in WAC 365-190-120 and Frequently Flooded Areas are defined in WAC 365-190-110.
- C.** San Juan County adopted a public participation plan for the revision of its development regulations regarding critical areas in Resolution 56-2006; the plan was most recently updated in Resolution 32-2011.
- D.** The applicable science related to Geologically Hazardous Areas and Frequently Flooded Areas was reviewed and is summarized in Chapters 5 and 6 of the *Best Available Science Synthesis for San Juan County, May 2011*; which was adopted in Resolution 22-2011.
- E.** Additional review of the County's critical areas regulations was undertaken and is described in the documents "Review and Recommendations for Geologically Hazardous Areas" and "Review and Recommendations for Frequently Flooded Areas."
- F.** The County now desires to complete the review and update of its development regulations regarding Geologically Hazardous Areas and Frequently Flooded Areas previously due in 2006 as required by RCW 36.70A.130.
- G.** An environmental checklist was prepared evaluating potential effects of the proposed Geologically Hazardous Areas and Frequently Flooded Areas protection amendments and a notice of Determination of Nonsignificance was issued on June 23, 2011, re-issued on June 28, 2011 and published on June 29<sup>th</sup>. The notice was provided to federal, state and local agencies in accordance with San Juan County Code 18.80.050 and WAC 197-11-340.
- H.** The 60-day notice on the proposed amendments to the Geologically Hazardous Areas and Frequently Flooded Areas protection regulations, as required by RCW 36.70A.106, was provided to the Washington State Department of Commerce on June 28, 2011, and was assigned Material ID No. 17098.
- I.** Efforts to involve and inform the public included:
  - I. Request for Best Available Science (BAS) submittals from the public in June-July 2010.
  - II. Public workshops on San Juan Island, Orcas Island, and Lopez Island in September

2010, to address “hot button” issues.

- III. Joint Planning Commission/County Council public workshops in February 2011, to review and discuss the first draft Best Available Science Synthesis and County Council workshops in May 2011 to discuss the second draft. Public comment was accepted at all meetings.
  - IV. Public workshops in June 2011 to discuss the review of existing regulations and determine policy direction for the revision of regulations.
  - V. Advertisements of Planning Commission and County Council meetings in local papers, including online media.
  - VI. Notice of the availability of the proposed ordinance and staff report was e-mailed to residents, property owners, and interested parties who requested to be kept informed prior to the Planning Commission and County Council hearings.
- J.** The Planning Commission conducted a duly advertised public hearing on July 15, 2011.
- K.** The County Council conducted a duly advertised public hearing on October 18, 2011.
- L.** The County Council makes the following findings:
- I. The Best Available Science was included in developing the proposed amendments, which will protect Geologically Hazardous and Frequently Flooded Areas in conformance with the requirements of the Growth Management Act.
  - II. Types of geologic hazards and risks are identified in accordance with WAC 365-190-120(3) and (4).
  - III. Clarifying the purpose of the regulations will enhance consistency with the WAC.
  - IV. Reducing the minimum required vertical rise and clarifying the method for measuring slope will improve the accuracy of the slope characterization, reducing confusion for staff, property owners, and their agents.
  - V. Adding previously omitted landforms listed in the WAC will enhance consistency with state regulations.
  - VI. Replacing the outdated reference to obsolete soil types and complexes in the Classification of Category II areas with the current USDA list of soils that have a subclass suffix of “e” (i.e., a high risk of erosion) will ensure that the necessary information will be provided with development applications, as these are the soil types that can exacerbate hazards in some situations.
  - VII. Including all areas that are mapped as having a susceptibility to liquefaction as Category III will ensure that the necessary safety review and requirements will be applied in conjunction with building permit applications.
  - VIII. Updating the name of the seismic rating class will enhance consistency with the International Building Code and the International Residential Code.
  - IX. Requiring geotechnical reports for the discharge of concentrated runoff within 50 feet of Category I and II areas will ensure that the necessary geotechnical information will be provided to the County with development applications.
  - X. Requiring geotechnical reports for development applications within Category I and II areas will ensure that the County receives the site-specific, detailed geotechnical information necessary to determine if a project meets the required criteria, or qualifies for a waiver or modified requirements (as provided in the code).
  - XI. Correcting the building code title will enhance consistency with the current International Building Code.
  - XII. Including reference to the location of bulkhead regulations elsewhere in the Unified Development Code will enhance compliance with bulkhead requirements and any necessary mitigation of related impacts.

- XIII. Clarifying the project area, content, and author of geotechnical reports will allow for a more comprehensive view of potential geological threats and allow for the site-specific determination of any necessary buffers or setbacks. This will also ensure that an experienced and licensed individual is authoring the report (i.e., that the information contained therein can be relied upon).
- XIV. Because serious errors are known to exist in the Federal Insurance Administration Flood Insurance Rate Maps (FIRMs) current as of this adoption, the FIRMs referenced in this ordinance shall refer to the most current versions as new maps become available.
- XV. This ordinance completes the update to the County’s development regulations regarding Geologically Hazardous Areas and Frequently Flooded Areas as required by RCW 36.70A.130 and based upon the review and evaluation described in Resolution No. 98-2005 and the additional review in the “Review and Recommendations for Geologically Hazardous Areas” and “Review and Recommendations for Frequently Flooded Areas.”
- XVI. The County Council agrees with the findings and recommendations of the Planning Commission, but finds that some modifications are needed for clarity. These changes are included in this ordinance.
- XVII. After considering the evidence in the record, the County Council approved the ordinance.

**NOW, THEREFORE BE IT ORDAINED** by the County Council of San Juan County, State of Washington, as follows:

**Section 1. SJCC 18.10.040 and Ord. 52-2008 § 16 are each amended to read as follows:**

**18.10.040 Establishment of land use districts and official maps.**

A. Land Use Districts. This Unified Development Code applies to the land use designations and map symbols in Table 1.1, below, that are established by the San Juan County Comprehensive Plan and official maps.

**Table 1.1. Comprehensive Plan Land Use District Designations**

<b>Abbreviation</b>	<b>Land Use District</b>
<b>Growth Areas</b>	
FH UGA	Friday Harbor Urban Growth Area
ES UGA	Eastsound Urban Growth Area
LV UGA	Lopez Village Urban Growth Area
<b>Activity Centers</b>	
VC	Village commercial
VI	Village industrial
VR	Village residential
HC	Hamlet commercial
HI	Hamlet industrial
HR	Hamlet residential

IC	Island center
MPR	Master planned resort
Rural Lands	
RGU	Rural general use
RR	Rural residential
RFF	Rural farm-forest
RI	Rural industrial
RC	Rural commercial
Resource Lands	
AG	Agricultural resource lands
FOR	Forest resource lands
Special Lands	
C	Conservancy
N	Natural
Overlay Designations	
MRL	Mineral resource lands
ESA	Environmentally sensitive areas
OSC	Open space conservation
A	Airport

Areas subject to subarea plans fall under the guidelines of those particular ordinances (see SJCC 18.30.050(D) and 18.30.190). The boundaries of the various land use districts and subarea plans are shown on the San Juan County Comprehensive Plan official maps (see subsection (B) of this section).

**B. Official Maps.**

1. There is hereby made a part of this Unified Development Code a series of maps which shall be known officially as the “San Juan County Comprehensive Plan Official Maps” (hereafter, “the official maps”). The official maps shall show all those areas of San Juan County which fall under the jurisdiction of this code and the designated land use classes and districts for all areas of San Juan County.
2. There shall be only one official copy of the official maps, which shall reside in the custody of the San Juan County community development and planning department. Whenever any portion of the official maps is legally amended, the official copy shall be altered promptly to reflect the amendment.
3. At the time of adoption of this Unified Development Code, one copy of the official maps shall be filed with the San Juan County auditor. In addition, at least once every 12 months following the filing of the initial official maps with the auditor, the community development and planning department shall make an additional copy of the official maps and file it with the initial official maps in the auditor’s office. If the official maps have not been amended during the 12-month period, the planning department may file with the auditor a notice to that effect, signed by the planning director, in lieu of a copy of the official maps. The purpose of these annual filings is to maintain an official record of the

changes occurring over time to the land use classes and districts. At no time shall the copies of the official maps filed with the auditor be altered in any way.

4. Where questions arise regarding the precise boundaries of any designated environment, the ~~administrator~~ Director shall make the final determination, subject to the provisions of SJCC 18.80.140(B), open-record appeals. Unofficial copies of the official maps may be prepared for administrative purposes and for sale to the public.

#### C. Land Use District Boundaries.

1. Land use district boundaries, unless otherwise indicated by natural land forms, shall follow lot lines or the centerline of streets and alleys as shown on the official maps. Where the street layout on the ground varies from that shown on the official maps, the districts shown on the official maps shall be applied to the streets as actually laid out so as to carry out the intent and purpose of this code.

2. Land use district boundary lines shall extend parallel from their landward location to a point of intersection at the center of all bodies of water. Bodies of water include all saltwater bodies, streams, and lakes.

D. Critical Areas Maps. Critical areas maps are provided only as a general guide to alert the viewer to the possible location and extent of critical areas. The maps should not be relied upon to establish the existence or boundaries of a critical area nor to establish whether all of the elements necessary to identify an area as a critical area actually exist. However, the maps may be relied upon by the ~~administrator~~ Director as a basis for requiring field investigation and special reports. In the event of a conflict between information shown on the maps and information shown as a result of field investigation, the latter shall prevail. At the request of an applicant, the ~~administrator~~ Director will conduct a site visit before requiring field investigations or special reports.

The definitions and classifications provided in this code are the controlling factors in determining the actual presence and extent of a critical area. Sources for mapped information include, but are not limited to, those listed in subsection (E) of this section.

#### E. Summary of Map and Data Sources by Topic.

1. Geologically Hazardous Areas (SJCC 18.30.120).
  - a. United States Geographical Survey (USGS), Topographic Maps.
  - b. United States Department of Agriculture (USDA), San Juan County Soil Survey.
  - c. Washington Department of Ecology (WDOE), Coastal Zone Atlas.
  - d. Washington State Department of Natural Resources (WDNR) Liquefaction Susceptibility Map of San Juan County, Washington.
2. Frequently Flooded Areas (SJCC 18.30.130).
  - a. Federal Emergency Management Agency (FEMA), National Flood Insurance Program Flood Insurance Rate Maps (FIRM).
  - b. WDOE, Coastal Zone Atlas.
3. Critical Aquifer Recharge Areas (SJCC 18.30.140).
  - a. "Water Resource Assessment Technical Report," San Juan County Comprehensive Water Plan.
  - b. San Juan County Water Resource Management Plan, as adopted by the board of County commissioners in October 2004.
  - c. "San Juan County Critical Aquifer Recharge Area, Critical Area/Environmentally Sensitive Area Overlay District Map," October 2008. This map shall be in effect until December 2, 2010.

- d. San Juan County Summary of Best Available Science for Critical Areas, September 2008, Chapters 1, 2, 7 and References.
- 4. Wetlands (SJCC 18.30.150).
  - a. U.S. Department of the Interior, National Wetlands Survey.
  - b. San Juan County Wetlands Survey
- 5. Fish and Wildlife Habitat Conservation Areas (SJCC 18.30.160).
  - a. Washington Department of Fish and Wildlife (WDFW), species and habitat data.
  - b. Washington Department of Natural Resources (WDNR), Water Type Reference Maps.
  - c. WDNR, Natural Habitat Program data.
  - d. WDOE, Coastal Zone Atlas.
  - e. WDFW data.
  - f. Puget Sound Water Quality Authority (PSWQA), Puget Sound Environmental Atlas.

**Section 2. SJCC 18.30.120 and Ordinance 2-1998 Exh. B § 3.6.5 are each amended to read as follows:**

**18.30.120 Geologically Hazardous Areas**

**A. Classification Applicability.** ~~Geologically hazardous areas are classified in three categories according to the probability of hazardous geologic activity occurring. The provisions of this section apply in and within 200 feet of all Geologically Hazardous Areas.~~

**B. Identification and Classification.**

1. All of San Juan County has some level of risk associated with geologic hazards. The County classifies areas of known or suspected risk into three categories as described in this subsection.
2. In applying these regulations, the requirement to identify geologically hazardous areas is limited to those located in and within 200 feet of the proposed development area.
3. Slope is one factor which is considered in classifying geologically hazardous areas. Slope is the vertical change in elevation that occurs in a given distance expressed in percent (%). In all cases, a slope is delineated by establishing its toe and top and measured by averaging the inclination over at least 20 feet of vertical relief. Slope is measured perpendicular to the contour of the land and for classification purposes it is measured in 10-foot vertical increments. In the absence of a topographic field survey of the subject property, the administrator Director shall may use the United States Coast and Geodetic Survey 7.5 Minute Series Topographic Quadrangle Maps San Juan County Digital Elevation Model (DEM) based on Light Distance and Ranging (LiDAR) technology, or other technology, to determine estimate slopes. In determining slopes and other geologic factors, however, conditions in the field shall control.
4. Geologically hazardous areas are classified in three categories according to the probability of hazardous geologic activity occurring and potential consequences to people

and property.

**1a. Category I – Landslide and Other Hazards.**

- ai.** Areas designated in the Washington Department of Ecology Coastal Zone Atlas as U (Unstable), UB (Unstable Bluff), URS (Unstable Recent Slide), or UOS (Unstable Old Slide) and other areas identified by site-specific geologic reports.
- bii.** Areas with slopes of greater than 50 percent and with a vertical relief of 20 feet or more, except areas of exposed, unfractured bedrock. If any portion of a slope meets this definition, the slope or some larger portion may be designated a landslide hazard area.
- iii.** Areas designated as Quaternary slumps, earthflows, mudflows, or landslides on maps published by the United States Geological Survey or Washington Department of Natural Resources.

**2b. Category II – Erosion, Landslide, and Other Hazards.**

- ai.** Erosion hazard areas characterized by soils identified in the USDA *Soil Survey of San Juan County, Soil Survey Washington* as having ~~severe water~~ a high risk of erosion hazards: Those soils with a land capability subclass of “e.”
- ~~i. The Pickett Soil portion within the Pickett Rock Outcrop Complex;~~
  - ~~A. (PrD only where slope exceeds 15 percent);~~
  - ~~B. (PrE);~~
- ~~ii. The Roche Soil portion within the Roche Rock Outcrop Complex, 30 to 70 percent slopes (RxE); or~~
- ~~iii. Roche gravelly loam, 8 to 15 percent slopes (RgC).~~
- bii.** Category II landslide hazards include any area with all three of the following characteristics:
  - iA.** Slopes in excess of 15 percent;
  - iiB.** Soil having layers of moderate or faster permeability (0.8 inches per hour or greater) overlying layers having very slow or slower permeability (0.20 inches per hour or less) Pervious soil layers overlying semi-pervious to impervious soil layers; and
  - iiiC.** Evidence of springs or groundwater seepage to the surface.
- eiii.** Mine Hazards. Areas directly underlain or affected by mine workings including steep and unstable slopes created by open mines. Mine hazard areas are based upon the identification of active or historic mining activity and site-specific information regarding topography and geology provided by the applicant as needed.

**3c. Category III – Seismic Hazards.**

- i.** San Juan County in its entirety is located within Seismic Zone 3 Design Category D<sub>1</sub> of in accordance with the Uniform International Building Code and the International Residential Code.
- ii.** Liquefaction susceptibility zones identified in the Washington Department of Natural Resources Liquefaction Susceptibility Map.

**BC. Protection Standards.**

**1. Category I.**

- a. The following shall be prohibited:
  - i. Structures where the primary occupancy is public assembly, including but not limited to schools, churches, day care centers, hospitals and other medical facilities; and
  - ii. Facilities for emergency response and public safety.
- b. Applications for development ~~other than in subsection (B)(1)(a) of this section~~ in or within 200 feet of any Category I Geologically Hazardous Areas shall be accompanied by a geotechnical report, ~~which is approved by the County and~~ prepared in accordance with subsection ~~(C)D (Geotechnical Reports) of this section~~, below, and which demonstrates that:
  - i. The slope is less than 80 percent; and
  - ii. There is no hazard or the hazard will be mitigated with appropriate conditions. The geotechnical report shall specify adequate development conditions to ensure this.
- c. Development shall be located in accordance with the following:
  - i. Structures and improvements shall be sited, designed, and constructed to minimize cut and fill and to retain as much of the natural topographic character of the slope as possible; and
  - ii. Structures and improvements shall be located to avoid the most hazard-prone portion of the proposed development area and to preserve vegetation necessary to prevent soil erosion.
- d. Where previous human activity has significantly modified natural topography, the County may allow further modification of such slopes if the geotechnical report demonstrates that such activity will result in improved slope stability.
- e. Cleared or graded areas must be restored and protected until replacement plantings are established and maintained unless occupied by structures or other impervious surfaces to avoid soil erosion and to stabilize slopes. Temporary erosion and drainage controls may be required unless permanent restoration and protection are timed to ensure slope stability in the wet season.
- f. Where concentrated runoff (i.e., runoff that is visible above ground and that is not sheet flow) will be discharged within 50 feet of the boundary of a landslide or erosion hazard area, a geotechnical report, prepared in accordance with subsection D (Geotechnical Reports), below, is required.

**2. Category II.** ~~The administrator may, with discretion or upon receipt of a report from a qualified professional, waive or approve modifications to the requirements set forth in subsections (B)(2)(a – e) of this section.~~

- a. Applications for development in or within 200 feet of any Category II Geologically Hazardous Areas shall be accompanied by a geotechnical report, prepared in accordance with subsection D (Geotechnical Reports), below.
- b. Where concentrated runoff will be discharged within 50 feet of the boundary of a landslide or erosion hazard area, a geotechnical report, prepared in accordance with subsection D (Geotechnical Reports), below, is required.
- c. The Director may, based on the content of the geotechnical report, waive or approve modifications to the requirements set forth in subsections (C)(2) (d – f) of this section.

- ~~ad.~~ Development shall be located in accordance with the following:
- i. Structures and improvements shall be sited, designed, and constructed to minimize cut and fill and to retain as much of the natural topographic character of the slope as possible; and
  - ii. Structures and improvements shall be located to avoid the most hazard-prone portion of the ~~site~~ proposed development area and to preserve vegetation necessary to prevent soil erosion.
- ~~be.~~ Where previous human activity has significantly modified natural topography, the County may allow further modification of such slopes if a the geotechnical report, ~~prepared in accordance with subsection (C) of this section~~ demonstrates that such activity will result in improved slope stability.
- ~~ef.~~ Cleared or graded areas must be restored and protected until replacement plantings are established and maintained unless occupied by structures or other impervious surfaces to avoid soil erosion and to stabilize slopes. Temporary erosion and drainage controls may be required unless permanent restoration and protection are timed to ensure slope stability in the wet season.
3. **Category III.** Development activities are required to conform to the applicable provisions of the Uniform International Building Code or the International Residential Code, which contains structural safeguards to reduce the risks from seismic activity. Construction performed in accordance with the San Juan County Owner/Builder Provisions (SJCC 15.04.500-710) is exempt from conformance with the International Building Code and the International Residential Code.
4. **All Categories - General Protection Standards - Bulkheads.** Construction of shoreline stabilization structures, including seawalls and bulkheads, shall meet the requirements of SJCC 18.30.160 and 18.50. In addition to other required elements, geotechnical/coastal geologic reports required by these sections shall identify any potential adverse impacts to adjacent and nearby properties. Adverse impacts to other properties shall be mitigated in accordance with the requirements of SJCC 18.30.110.
- CD.** **Geotechnical Reports.** ~~If a geotechnical report is required in accordance with this section, it shall include investigation, testing, analysis, and recommendations and~~
1. Geotechnical reports shall be prepared, stamped and signed by an ~~engineer~~ qualified professional, with relevant geotechnical education and experience, licensed to practice in the state of Washington. The engineer shall certify that the project as conditioned or otherwise will pose no unreasonable threat to persons or property either on or off site and that the project will not decrease slope stability. These reports must:
    - a. Be appropriate for the scale and scope of the project;
    - b. Include all geologically hazardous areas and all potentially affected areas in and within 200 feet of the proposed development area. If the affected area extends beyond the subject property, the geotechnical analysis may utilize existing data sources pertaining to that area;

- c. Clearly state that the proposed project will not decrease slope stability or pose an unreasonable threat to persons or property either on or off site;
  - d. Be adequate to determine compliance with this code;
  - e. Generally follow the guidelines set forth in the Washington State Department of Licensing *Guidelines for Preparing Engineering Geology Reports in Washington* (2006). In some cases a full report may not be necessary to determine compliance with this code, and in those cases a letter or abbreviated report may be provided; and
- 2. The Director will review geotechnical reports for completeness and compliance with this code.
  - 3. A geotechnical report does not expire unless there are changes in proposed land uses or site conditions.

**E. Qualified Professional.** For the purposes of this section, a qualified professional is a scientific expert in accordance with WAC 365-195-905 who is: (1) a geotechnical engineer, qualified civil engineer, or licensed engineering geologist; (2) with experience analyzing geologic, hydrologic, and ground water flow systems and slope stability, seismicity, faulting, and liquefaction; and (3) is licensed to practice in the state of Washington. When the proposed development is located in an area subject to coastal geomorphological processes, the professional shall have demonstrated experience in evaluating and providing technical recommendations related to sediment and sediment transport, and effects on property and shoreline stability.

**Section 3. SJCC Section 18.30.130 and Ord. 2-1998, Exh. B § 3.6.6 shall be amended to read as follows:**

#### **18.30.130 Frequently Flooded Areas**

- A. **Classification Applicability.** This section applies to all areas of special flood hazards within the jurisdiction of San Juan County as identified by the Federal Insurance Administration on its most current Flood Insurance Rate Maps (FIRMs), Numbers 530149-0001-0008, dated June 7, 1977, and any revisions thereto, which are hereby adopted by reference and declared to be part of this code. The Director shall maintain the most current FIRMs are on file at the permit center Department. Where differences exist between the FIRMs and conditions in the field, conditions in the field shall control.
- B. **Protection Standards.** All developments in areas of special flood hazards must first meet the requirements of this code including any subarea or activity center plans and the San Juan County health and building codes adopted in Chapters 13.04 and 15.04 SJCC, respectively. When allowed, such developments shall also meet the requirements for floodproofing or construction as detailed on the Federal Emergency Management Agency (FEMA) National Flood Insurance Program Elevation Certificates in SJCC 15.12, the San Juan County Flood Control Ordinance.

**Section 4. Savings Clause:**

This ordinance shall not affect any pending suit or proceeding; or any rights acquired; or liability or obligation incurred under the sections amended or repealed; nor shall it affect any proceeding instituted under those sections. All rights and obligations existing prior to adoption of this ordinance shall continue in full force and effect.

**Section 5. Severability:**

If any provision of this ordinance or its application to any person is held invalid, the remainder of this ordinance and the application to other persons or circumstances shall not be affected. Remaining sections of the ordinance shall be interpreted to give effect to the spirit of the ordinance prior to removal of the portions declared invalid.

**Section 6. Effective Date:**

This ordinance is effective the 10th working day after adoption.

**Section 7. Codification:**

Sections 1, 2, and 3 of this ordinance will be codified.

